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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,234	09/11/2003	Charles W. Boecker	X-1028 US	7717

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EXAMINER

SHINGLETON, MICHAEL B

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,234

Applicant(s)

BOECKER, CHARLES W.

Examiner

Michael B. Shingleton

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 14, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 2-13, 15-25, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/16/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14, 27 and 28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Iravani 6,353,368 (Iravani).

Figure 1B and the relevant text of Iravani discloses a VCO having an oscillation circuit 100 that is operably coupled to receive a control voltage 206 at a VCO 100 input and to produce an oscillation signal responsive to the control voltage. Figure 1B and the relevant text of Iravani also discloses a phase adjustment module “(F to V converter) that is operably coupled to receive the oscillation signal and produces a correction voltage through element 202 that is used to counteract the phase shift, i.e. jitter in the VCO. This resultant output voltage on 206 does adjust the oscillation signal frequency (See column 4, around line 40). The structure indicated above also provides for the method steps of receiving a control voltage 206 and producing an oscillation signal responsive to this control voltage. Note that the VCO 100 clearly provides this function. A correction voltage is produced, i.e. either 204 or 206 and this is done so as to counteract the phase shift resulting from phase noise i.e. jitter in the oscillation signal. The correction voltage as indicated above does adjust the oscillation signal (See column 4, around line 40). The sampling of the F_{OUT} signal occurs over a time period and produces over time a sampled voltage that corresponds to the change in frequency i.e. the change in the period of the oscillation signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parker 5,256,989 (Parker) in view of Iravani 6,353,368 (Iravani).

Parker discloses the basic Phase Locked Loop (pll) as claimed. This includes a phase detection module 14, 16, a loop filter 220 and a VCO 24. Parker is silent on the details of the VCO. Note that the divider 30 completes the loop of the pll.

Figure 1B and the relevant text of Iravani discloses a VCO having a phase adjustment module (F to V converter) that is for reducing phase noise in the oscillation signal (See column 4, around line 40). The phase adjustment module clearly receives the oscillation signal F_{OUT} and produces a correction voltage 204 or 206 that is for counteracting the phase shift resulting from phase noise i.e. jitter in the oscillating signal. This correction voltage is provided to the input of the VCO so as to adjust the oscillation signal as noted above.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the VCO of Parker with one of Iravani because as the Parker reference is silent on the details of the VCO, one of ordinary skill in the art would have been motivated to use any conventional art recognized VCO such as the VCO disclosed by Iravani.

Allowable Subject Matter

Claims 2-13, 15-25, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

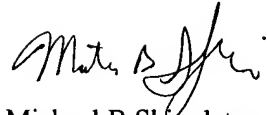
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571)272-1770.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal, can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Michael B Shingleton". The signature is fluid and cursive, with a large initial "M" and a stylized "S".

Michael B Shingleton
Primary Examiner
GROUP ART UNIT 2817